Abstract Preview

This abstract is submitted!

Category of Presentation: **Research reports**

Primary topic: ONCOLOGY & PALLIATIVE CARE

2nd topic: EVIDENCE BASED PRACTICE

3rd topic: WOMEN'S HEALTH

Title: **IS MANUAL LYMPH DRAINAGE APPLIED AFTER AXILLARY LYMPH NODE DISSECTION FOR BREAST CANCER EFFECTIVE TO PREVENT ARM LYMPHOEDEMA?**

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Text: **Purpose:** This single-blinded randomised controlled trial aimed to compare the effect of a treatment programme consisting of guidelines, exercise therapy and manual lymph drainage (MLD) (experimental group) and the same programme without MLD (control group) on the development of breast cancer- related lymphoedema.
Relevance: Recently, one study has proven that the combination of guidelines about the prevention of lymphoedema, exercise therapy and manual lymph drainage (MLD) was more effective to prevent arm lymphoedema than alone guidelines (Lacomba et al 2010). The preventive effect of MLD on the development of lymphoedema has never been investigated in a peer-reviewed randomised controlled trial (Cheville 2010).
Participants: We included 160 consecutive operable breast cancer patients scheduled for a unilateral axillary lymph node dissection in our Breast Clinic.
Methods: All patients were randomised into the experimental group (N=79) and control group (N=81) with a randomisation table. Treatment started five weeks after the axillary surgery on average. Patients were treated during 20 weeks. The experimental group received 29 exercise therapy sessions and 34 MLD sessions and the control group received 28 exercise therapy sessions. The assessors were blinded for the allocation to the groups. This study is registered, number NTR1055.
Analysis: Primary endpoint was incidence of arm lymphoedema at 6 and 12 months. Lymphoedema was defined as an increase of 2.0 cm or more at two adjacent points of the pre-surgical value. Secondary outcome parameters were time to develop lymphoedema, lymphoedema volume and patient's quality life at 3, 6 and 12 months post-surgery and functioning problems related to lymphoedema 12 months post-surgery.
Results: Eight patients of the experimental group and five patients of the control group were lost to follow-up. Overall incidence rates for lymphoedema were comparable between both groups both at 6 months (12% vs 10%, odds ratio 1.2 [95% CI 0.4 - 3.4]; p=0.69) and at 12 months (23% vs 18%, odds ratio 1.3 [95% CI 0.6 - 2.9]; p=0.54). Time to develop lymphoedema was comparable in the experimental and control group (log rank p>0.05). Furthermore, both patient groups had 3, 6 and 12 months after surgery, a similar increase of the arm volume compared with the pre-surgical level (p>0.05) and a comparable mental and physical health-related quality of life (p>0.05). Finally, lymphoedema patients in both groups had comparable functioning problems due to their lymphoedema (p>0.05).
Conclusions: MLD applied after axillary lymph node dissection for breast cancer is not effective to prevent arm lymphoedema at short-term.
Implications: There is no need to apply MLD postoperatively on breast cancer patients to prevent arm lymphoedema. Physical therapists rather have to perform rehabilitative modalities (Cheville and Tchou 2007) as shoulder mobilisations, stretching of breast and shoulder muscles, scar tissue massage and exercise therapy and this to improve shoulder mobility, muscle strength, muscle flexibility and to stimulate lymphatic pump.

Key-Words: 1. breast cancer
2. lymphoedema
3. prevention

Funding acknowledgements: The study was funded by the Agency for Innovation by Science and Technology (Applied Biomedical Research).

Ethics approval: This trial had approval from the Ethical Committee of the University Hospitals of Leuven (B-number: 32220072574, S-number: 50682).

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Abstract Preview

This abstract is submitted!

Category of Presentation: **Research reports**

Primary topic: PHYSICAL INACTIVITY

2nd topic: ONCOLOGY & PALLIATIVE CARE

3rd topic: WOMEN'S HEALTH

Title: **PHYSICAL ACTIVITY LEVELS AFTER TREATMENT FOR BREAST CANCER: ONE YEAR FOLLOW-UP**

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Text: **Purpose:** The first aim of our study was to investigate the evolution of the total physical activity level and occupational, sport and household activity levels of breast cancer survivors, pre-operatively to one, three, six and twelve months after surgery. The second aim was to find predictive factors for changes in these activity levels between the pre-operative stage and twelve months post-surgery.
Relevance: Because there are increasing numbers of breast cancer survivors, high quality of life and hence high physical activity levels become more and more important. In addition, high physical activity levels are associated with 30% decreased risk of mortality after breast cancer. Among patients with breast cancer, few studies have examined the pattern of change of physical activity levels over time or the predictive factors for this change. Particularly sparse are studies comparing pre-surgical physical activity levels with those 12 months post-surgery.
Participants: Three hundred ninety-eight consecutive breast cancer patients treated in the Multidisciplinary Breast Clinic of Leuven were asked to participate. Two hundred sixty-seven patients (67%) with an axillary lymph node dissection or a sentinel node biopsy for a primary breast cancer were included. One hundred thirty-one patients (33%) were excluded.
Methods: Participants filled in the Physical Activity Computerised Questionnaire before the breast surgery and one, three, six and twelve months postoperatively. Patients-, disease- and treatment-related factors were prospectively collected. Patient-related factors were age, body weight and height (BMI), having a spouse, educational level, employment status, lymphoedema, impaired shoulder mobility and smoking behaviour. Disease -related factors included tumour size, lymph node stage and type of breast cancer. Treatment-related factors included type of breast surgery, surgery at the dominant side, type of axillary surgery, number of lymph nodes dissected and whether chemotherapy, radiotherapy and hormonal therapy were given.
Analysis: The evolution of four different physical activity variables from preoperatively to 1, 3, 6 and 12 months post-surgery were examined: total activity level and occupational, sport and household activity levels (MET-hours/ week). In addition, predictive factors for changes in these activity levels between the pre-operative and 12 months post-surgery stages were investigated.
Results: Total physical activity level and occupational, sport and household activity levels were significantly decreased the first month postoperatively and did not recover during the first year after surgery. 'Being employed' was a predictive factor for a larger decrease of the total activity level, comparing the pre-operative and 12 months post-surgery stages. Having a spouse, an impaired shoulder mobility, a pN2-3 lesion and over 20 lymph nodes dissected predicted a decrease in occupational activity. Advanced age and smoking behaviour predicted a decrease in sport activities, and not having a spouse predicted a decrease in household activities.
Conclusions: This study showed that one year after breast cancer surgery, preoperative physical activity levels were not recovered.
Implications: Breast cancer patients, and in particular those at risk for a decreased physical activity level, should be identified, encouraged and guided to increase their activities.

Key-Words: 1. breast cancer
2. physical activity

Funding acknowledgements: This study was supported by a grant from the Agency for Innovation by Science and Technology (Applied Biomedical Research).

Ethics approval: This study had approval from the Ethical Committee from University Hospitals Leuven (ML 3513).

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